THE

HOME FRIEND;

A WEEKLY MISCELLANY OF AMUSEMENT AND INSTRUCTION

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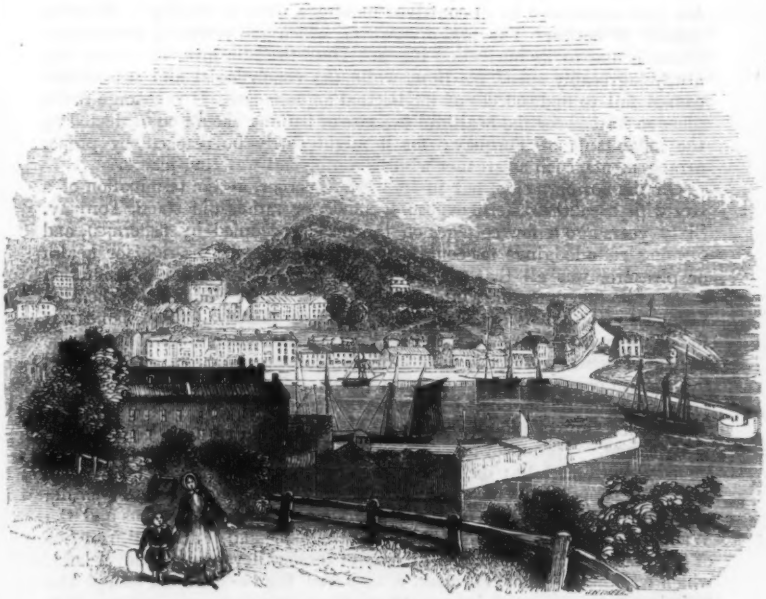
TORQUAY.



On the south coast of Devonshire, half-way between the rivers Dart and Teign, lies the beautiful and far-famed Torbay. Two bold headlands, Hope's Nose on the north, and Berry Head on the south, distant nearly six miles from each other, form the extreme points of the bay. The bay itself, in its general configuration, pursues a path in the direction of the principal points of the compass, having its northern, western, and southern sides bounded by the coast, while the eastern or remaining side is open to the waters of the British Channel. But this rigid form of the shore is most agreeably broken by smaller bays and inlets, and these are again diversified by precipitous rocks, by the pebbly beach, and by firm and extensive sands.

XUM

From the margin of the sea an undulating country spreads itself until it reaches the foot of gentle hills, which, covered with a verdure never fading, complete a scene which justifies the admiration of Napoleon, and the more recent praise of the historian, Macaulay.

The depth of the bay, measured due east and west from the line through Berry Head and Hope's Nose, is four miles and a half, and the length of the irregular coast which connects these two horns of the bay is estimated to be not less than twelve miles.

Three principal places lie upon the shores of Torbay. Brixham on the south, famous for its fish-market, and for being the landing-place of the Protestant William. The large straggling village of Paignton occupies the centre of the western side of the bay. From the bay, and from many points of view on the land, this village forms an important feature of the landscape; but a near inspection diminishes the favourable impression which the distance made, and except its venerable church, once open to the sea, but now surrounded by ill-contrived buildings, there is nothing in Paignton worthy of notice. The praise, however, which the works of man cannot claim, is due to its unrivalled beach. Here the idle lover of nature may always agreeably spend his time, while the conchologist and sea-botanist cannot fail to find sources of intellectual amusement. It is strange that a place so formed for the healthful exercise of bathing should be neglected by the inhabitants of Torquay; for it might easily be reached by proper arrangements, such as are met with in continental watering-places.

On the northern side, but in its western corner, at the termination of a bay with a south-western exposure, stands, or rather did stand, Torquay. Sixty years ago a few cottages on the beach, occupied by fishermen, and forming rude lodgings for country families seeking the sea-side for health or pleasure, was all that existed of Torquay. Soon after a reputation arose of its fitness for the winter residence of invalids, whom it was then the fashion to expatriate to Nice, Montpellier, or Madeira. This fame was found to be no false report; and while English winters were found to be robbed of their severity, any defects of climate were more than compensated by English comforts and by English habits. But we are wandering from our description of the place itself, while we are pointing out its advantages. Let us then approach Torquay from the sea-side, as it is thus that its form is best seen. Torquay Proper consists of a small portion of level ground bounded by three hills; on the left hand rises Waldon Hill; in front of the spectator, supposed to have his back to the sea, is the Braddons; on the right hand is Park Hill. Two valleys, one between the Braddons and the Waldon Hill, and the other between the Braddons and Park Hill, run out of this plain, but so sinuous is the course of these valleys, that the level land, which was the origin of Torquay, is sheltered from every wind except the turbulent but warm south-west. Above this level plain, and looking over the bay, is built a terrace; and higher still, detached villas with charming gardens and shrubberies fill up the scene, which forcibly brings to our imagination a natural theatre, the lower ground being the stage and parterre, while the terrace and villas may be mentally occupied by the more aristocratic spectators.

Experience has shown that the benefits to be derived from a Torquay climate are not limited to the narrow space which we have just described; that the higher situations are not more exposed to the south-western gales than the less elevated ones, while they are equally sheltered from the north and east. A dry subsoil, an entire freedom from marsh and running water

(beautiful in the eye of the poet, but to the man of fact redolent with sewers and corruptions), are the natural advantages of the district on which are placed the (now) old and the modern Torquay.

The valley to the right of which we have just spoken pursues its way through the public gardens of the town, towards Bishopstowe and Babbicombe; but before we can traverse it, our attention is called to the Meadfoot district, with its beautiful villas and noble crescent. Within the last seven years the speculative energies of man has created on this spot a town, to which there is no parallel in England, nay, scarcely any in Europe. From almost all the residences in this part of Torquay the views are most interesting, but from the higher ones they are strikingly beautiful. From many of these spots we can command a view of the Channel, of the whole of Torbay, backed as it is with hills covered with wood, of Torquay, and of the distant Dartmoor Hills, blue, but conspicuous on the horizon, while the foreground is filled up by the reverse of Park Hill and the wood that skirts the Daddyhole plain.

Torquay has no antiquities; how can a town not sixty years old have such? but its neighbourhood contains some very interesting relics. The Norman door of Paignton Church, the ruins of Compton Castle, the remains of Berry Pomeroy, the Chapel at Tor Abbey, and the Church at Cockington, well repay the lovers of ancient architecture: and even if some of these be inferior to the edifices of other places, the charms of their romantic and picturesque situation will make up any deficiency.

The taste which is shown in the private residences at Torquay has not till of late been exhibited in public buildings; in fact, till lately there were no public buildings. Recently, however, there have been built a town-hall, an infirmary, and the new church at Upton. The town-hall exhibits great skill in overcoming the natural disadvantages of its contracted site. The fine interior of Upton Church is admirably adapted to its pious uses; but the church still wants its tower and spire, which, when completed, will make it a marked feature in the architecture of the town.

The old church at Tor, as to its exterior, interior, and situation, is almost every thing we could wish for in a parish church—save that it is too small for the large population around it.

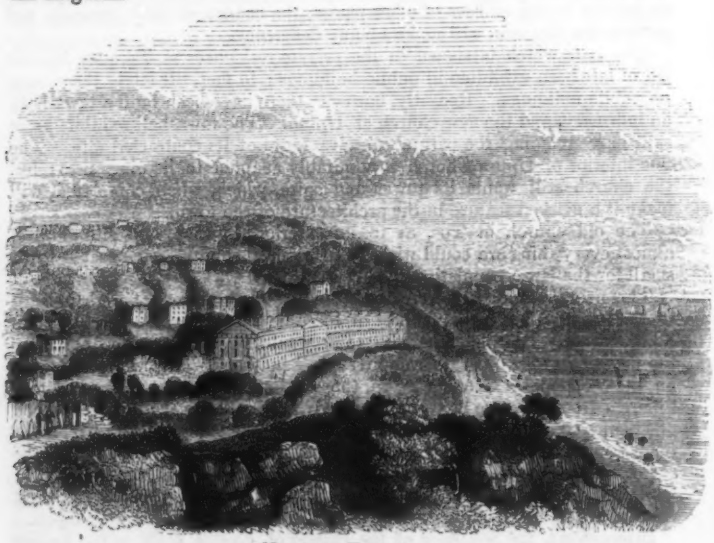
The neighbourhood of Torquay possesses many objects of high interest to the lover of nature; and most of these lie within a walk or at most an hour's drive. But to enumerate these would be to take upon ourselves the task of a guide or of the compiler of a hand-book. But we may remark on the wonders of Kent's Cavern, the vestiges of a state of nature very different from what we now see to exist. The walks in the neighbourhood of Ilsham, constructed by the Bishop of Exeter and Mr. Bartlett, call for the thanks and the admiration of the pedestrian. One of these, overhanging the sea and passing over and under rocks, excites both astonishment and delight; while the shrubs and trees, green in the spray of the sea, make us forget that we are in England, and carry us to the shores of the Mediterranean.

Bishopstowe, the residence of the Bishop of Exeter, built in the Italian style of architecture, is charmingly situated. The visitor to Anstey's Cave must feel how harmoniously it combines with the natural scenery in which it is so strikingly placed. Near this enchanting spot is Babbicombe, and further on is Watcombe, from which, if we return to Torquay by Stoney Valley, we shall be almost sated with scenery.

Although it is scarcely within our province to institute a comparison between the climate of Torquay and of other places visited by the invalid,

and by those who wish to shun the severity of more northern situations, yet our brief notice would be incomplete without some mention of the subject. The professional opinion of Sir James Clarke, not an interested witness, is however at hand, and is undoubtedly of the highest authority. "Torquay," says Sir James, "is certainly drier than other places, and almost entirely free from fogs. The drier state of the atmosphere probably arises in part from the limestone rocks which are confined to the neighbourhood of this place, and partly from its position between the two streams, the Dart and the Teign, by which the rain is in some degree attracted. Torquay is also remarkably protected from the north-east winds, the great evil of our spring climate. It is likewise well sheltered from the north-west. There is scarcely a wind that blows from which the invalid will not be able to find a shelter for exercise either on foot or horseback . . . . The selection will, I believe, lie among the following places as winter and spring residences:—Torquay, Undercliffe, Hastings, and Clifton, and perhaps in the generality of cases will deserve the preference in the order stated."

A long series of observations has been made at Woodfield, the residence of E. Vivian, Esq., by that gentleman, from which it appears that the mean annual winter temperature is 44° at Woodfield, and 46° in the more sheltered portions of the town, a temperature far higher than the general average of the kingdom.



MEADFOOT TORQUAY.

We must now conclude this sketch of Torquay, but to some of our readers the following details will not prove uninteresting. Torquay is itself in the parish of Tor, or Tor-Mohun. The principal part of it belongs to Sir Lawrence Vaughan Palk, Bart.; the remaining part to Mr. Cary, of Tor Abbey. The parish of Tor-Mohun was anciently called Tor-Brewer, from a family of that name, said to be descended from Richard Bruer, or Brewer, a follower of the Norman Conqueror. Lord William Brewer, founder of

Tor Abbey, Baron of Torbay and Totnes, is supposed to have been born at Tor. This nobleman was distinguished by the confidence of four sovereigns, Henry II., Richard I., John, and Henry III. He had extensive estates in Devonshire and Somerset. Henry III. gave him wardship of Reginald de Mohun, Lord of Dunster, who afterwards married Alicia, fifth daughter of Lord Brewer, and so came in possession of Tor Brewer. Reginald de Mohun left two sons, Reginald and William: the former, by exchange with his brother, came in possession of Tor-Brewer; he built the chapel adjoining the court-house, and died in 1257. The name of the parish was at this period changed from Tor-Brewer to Tor-Mohun, which it still bears.

At the Reformation, the manor was bought by John Ridgeway, whose grandson in 1662 was created Earl of Londonderry; and Lucy, one of the co-heiresses, brought it by marriage to Arthur Marquis of Donegal. The Earl of Donegal in 1768 sold the manor to Sir Robert Palk, Bart., grandfather of the present baronet.

A VISIT TO AUSTRALIA AND ITS GOLD REGIONS.—No. IX.

SYDNEY.

The Sydney people are early risers; and it is a very common thing to see a number of livery-attended turn-outs raising the dust of the Domain at six or seven in the morning. This Domain is one of the most beautiful spots imaginable; in some respects it is not unlike Mount Edgecumbe at Plymouth, but the ground is not so high. On it, as we have mentioned, the Government-house is built, the gardens of which are open to the public from sunrise to sunset; and the pleasure of a ramble through them is

Government-House, Sydney.

enhanced by the music of the band of the regiment quartered there, which generally plays every day upon the lawn. The flower garden contains, in a high state of perfection, varieties of every beautiful flower that you may

have seen at home, and numbers of those which are indigenous, and, consequently, new.

The botanical garden also forms part of the Domain, and is also an object of great attraction. Here are all those plants and trees which cause one's imagination to take flight to distant parts; the air is loaded with a delicious perfume, and the only sounds you hear are those of the sea rippling on the neighbouring beach, and the constant song of the myriads of locusts that occupy the surrounding trees and shrubs. These gardens, from their delightful situation, their proximity to the city, the pleasant walks they contain, the great variety of rare shrubs and flowers and trees they produce, and the fine views they command, have been much frequented on holidays by all classes of the community since 1837, when they were thrown open to the public on Sundays by Governor Sir George Gipps. The Upper, or, as it is sometimes called, the Middle Garden, was planned as early as 1812 by Mrs. Macquarie, and formed out of the wild bush, under the superintendence of Mr. Alexander Fraser, botanist. In 1832, James Busby, Esq., introduced into the colony a great variety of vines, which were planted in this garden; and it has since occasionally continued to receive fresh accessions of flowers and trees from many countries. This garden is known by the magnificent specimen of the Norfolk Island pine which adorns its middle walk.

The lower, and more extensive and beautiful garden, separated from the upper by the walk leading from the fort along the Government bathing house, and occupying the circular sweep of the head of Farm Cove, was not in existence when Lieut.-Gen. Sir Ralph Darling assumed the government of the colony in December 1825. The spot which now smiles in all the loveliness of a highly cultivated garden was then nothing but thick bush and bare barren rocks. But by the direction of the governor, and the persevering skill of Mr. Fraser and his botanical successor, Mr. Richard Cunningham (who was lost in the bush in one of Sir Thomas Mitchell's exploring excursions), this desert and solitary place was soon made to rejoice and blossom with shrubs and flowers of the richest hues. Both the Upper and Lower Gardens were much extended and beautified, from 1833 to the present year, under the able superintendence of the late Mr. James Anderson, botanist, who effected greater improvements on them than all the former botanists together.

Through another part of the Domain is formed a most excellent drive, and several beautiful walks, in extent more than three miles; these are cut through the bush (or, as we should call it in England, the wood), and delightful peeps of the town and harbour, with its beautiful islands, are constantly recurring. And here are seen an immense variety of the most elegant wild flowers peeping out from the beautifully broken ground, birds of lovely plumage seeking for food, and multitudes of those exquisite insects which are so highly valued by the entomologists at home.

The climate is very delightful. The heat is certainly greater than it is in England, but it is of a different kind, and never causes that depressing and suffocating sensation so frequently experienced there. It is, on the contrary, what has been aptly called an "exhilarating heat."

A branch of the harbour of Port Jackson, called the Parramatta River, is navigable for something like twenty miles, and affords to the Sydney "cockneys" their "Battersea," "Putney," and "Richmond," although under different names.

Along the banks of the river from Sydney, to the town of Parramatta,

a distance of about fifteen miles, and particularly in the vicinity of Kissing Point, almost equidistant from either, there are numerous orchards, orangeries, vineyards, and vegetable gardens, which give a pleasing variety to the wilder parts of the natural scenery, and supply the Sydney markets with a multiplicity of their rare productions. In the town of Parramatta there is little of the bustle and stir of business, that give such life to the metropolis; but the traffic on the river is very considerable. Besides the number of boats and vessels of small burden employed in the conveyance of produce, fire-wood, and other marketable commodities, there are several steam-boats that ply daily between the towns. Parramatta is more a place of retirement than of business. Its distance, too, from Sydney being so easy, the scenery all the way so delightful and refreshing, and such facility and rapidity of conveyance being afforded by the steamers, it is not surprising that a trip to it by water should form an agreeable recreation on Sundays, to those who are confined to sedentary and unhealthy occupations during the week.

PARRAMATTA RIVER, AND COCKATOO ISLAND.

The above view is taken from the high grounds of Balmain, overlooking Parramatta River, near the road through the bush to Sydney, round the head of Darling Harbour, and not far distant from Birch Grove, the delightful seat of Captain McLean, Principal Superintendent of Hyde Park Barracks. The spectator is supposed to be looking north-east. In the foreground of the picture we have a specimen of the Bush scenery that prevails along the banks of Parramatta River and Port Jackson. The *eucalyptus*, or gum-tree, is the most common production of the soil; but it is found associated with many others, such as the acacia, in great variety, the iron and stringy barks, the apple-tree, the tea-tree, the native oak, the cedar, the grass-tree, and a great diversity of flowering shrubs. In the neighbourhood of Sydney the wood is generally of stunted growth, but in

many parts of the colony it flourishes in much greater perfection, and rises to gigantic size. The sketch given will convey some idea of the soil and native productions of Balmain, and of the amount of labour that must have been required, with such materials, to form the large, populous, and thriving village, or rather town, which now rises amidst the rocks and brush of this once wild region.

The little singularly-shaped islet, floating on the water to the left, swelling out at the extremities, and depressed towards the centre, is called Spectacle Island, from its faint resemblance, or rather its want of resemblance, to a huge pair of spectacles; and the point of land on the opposite shore is denominated Pulpit Point, from its equally fanciful resemblance to a pulpit. This species of nomenclature has been very fashionable in the colony ever since its establishment. It has been practised by our discoverers of districts and rivers, for the purpose of gratifying the vanity of the governors, or other officials of the time; but to show that it is a practice "more honoured in the breach than the observance," we have merely to contrast the fine euphonious native names that have been retained, such as Woolloomooloo, Parramatta, Illawarra, &c., with such commonplace appellations as the Hunter, the Murray, the Patterson, Gipps' Land, Spectacle Island, Cockatoo Island, Goat Island, Pinchgut, the Bottle and Glass, the Hen and Chickens, and the Sow and Pigs!

The principal feature in the illustration, however, is Cockatoo Island, which is still used as a prison-house and house of correction for those reckless and misguided men, who having been originally transported to this colony for offences against the laws of England, are now undergoing the penalty of a second conviction for having outraged the laws of Australia. The buildings on the island are the work of the prisoners. Those seen on the left are the soldiers' barracks, capable of accommodating fifty men, to the right of these stand the convicts' barracks, with suitable accommodation for three hundred prisoners, and further to the right is the residence of the superintendent and his assistant. In addition to the erection of these buildings, and of some cells for solitary confinement, the labour of the prisoners has been directed to the excavation from the sold rock of several extensive siloes, for the preservation of grain. These siloes are air-tight, and so spacious as to cover nearly 100,000 bushels of wheat. The experiment has proved quite successful; for the grain has been found sweet, and in nowise deteriorated, after two years' exclusion from the light of day.

The island has a bare, desolate appearance, since the trees that had flourished upon it for centuries have been cut down, and their places supplied by white walls and sand-stone buildings, which, with the barren rocks on which they stand, now glare in the sunbeams, and afford no cool refreshing shade for the eye of the spectator. Only a few of its ancient inhabitants, those lofty tufted gum-trees to the right, are left standing as melancholy records of the ruin that has been wrought by the hand of civilization, on the pictorial appearance of the island.

Soon after the discovery of the eastern part of New Holland, by the immortal Cook, the British Parliament determined to establish a penal colony on that coast, at Botany Bay. The object which the Government had in view confessedly was, to rid the country of the load of criminals that was accumulating in her gaols, to find a suitable station for the safe custody, the punishment, and reformation of these criminals; and from such materials, as well as from the emigration of free settlers, to form a British colony, a new dependency of the British Crown. A fleet of eleven

sail was accordingly fitted out, and put under the command of Captain Arthur Phillip, R.N., Governor of the new colony, which was established, as we have mentioned, at the end of Sydney Cove, on the 26th day of January, 1788. During the administration of Governors Phillip, Hunter, King, Bligh, and Macquarie, or from 1788 to 1821, the system of convict discipline in the colony was, in its leading features, very much the same. With the exception of those retained as domestic servants for government officers, the rest of the prison population were employed in government buildings, experimental farms, or road-making. The great abundance of free labour at the disposal of Government, during the long administration of Governor Macquarie, is sufficiently attested by the incredible number of public buildings which he erected, and the extensive lines of communication which he opened to some of the principal agricultural districts of the colony.

The era of free emigration, which commenced to flow steadily in the early part of the government of Sir Thomas Brisbane, altered in some measure the prevailing system of discipline. Then commenced the judicious and beneficial assignment system, which at once relieved the Government of the burden of supporting a large number of its superabundant prisoners, and furnished the free settler, at a cheap market, with abundance of labour, to clear and cultivate his land, to manage his stock, and supply his establishment with domestic servants. This system, which continued in operation till within the last few years, like all human systems, had its evils as well as its benefits. It was certainly beneficial to the Government and the settler; but it did away with the uniformity of discipline that formerly prevailed; it left the punishment of the assigned man too much to the caprice of his employer; and accordingly, while many criminals, by mild and humane treatment, have been thoroughly reformed, many, it is to be feared, if we can believe their own dying confessions, have, by tyrannical treatment, been driven to the bush, to prey upon their fellow men, and finish their career on the scaffold.

While on the subject of the convict population, it will, perhaps, be considered a grave omission, if we do not allude to the existence of a deep and wide-spread feeling, that these colonies should no longer be made the receptacle for the scum of our gaols. This feeling has developed itself in the most energetic manner. A league has been formed, on a similar principle to the Anti-Corn Law League, and called the Anti-Transportation League. Meetings have been held in all the three south-eastern colonies, and in Van Diemen's Land, and resolutions passed breathing loud war against the home government, should they persist in corrupting their society longer against the will of the colonists, and reproaching it with "holding out the word of promise to the ear, and breaking it to the hope." Money has been extensively subscribed to carry on the agitation, and thirty citizens of the city of Melbourne put down their hundred guineas each to promote the cause to which they have set their hands. There can be no question that the labour of the convicts in making roads, and constructing other public works, in the early years of the colony, was of essential service to its progress; but there can also be no manner of doubt that the colonists themselves are the best judges of the time when they can afford to dispense with this contaminating and pestiferous assistance; and due intimation of this having been given to the authorities at home, and the latter having recognised the validity of the argument by promises to abstain, and yet continuing in spite of their promises to send ship load after

XUM

ship load of felons, the colonists have evident cause for the energetic nature of their proceedings; and justice being on their side, there can be no doubt whatever of their ultimate success. The Government however have, it is right to state, already sent out an expedition to New Caledonia, and other islands in the Pacific, with a view of selecting a convenient place for the future reception and punishment of convicts; and now that the discovery of gold in such abundance in these colonies renders it of still greater importance that reckless and unscrupulous criminals should be kept as far away as possible from places where, under the most favourable circumstances, the administration of justice is attended with great difficulty, and society has a sort of natural tendency to throw off all restraining fetters, and level every distinction but that of physical strength; it is probable that the authorities here will think twice at least before despatching another cargo of crime to a place where its presence will be so eminently dangerous and impolitic.

MICHAEL ANGELO.

Lorenzo the Magnificent reigned over Florence. In his palace and gardens was a fine collection of antique marbles, busts, and statues, which the princely owner converted into an academy for the use of young artists. Michael Angelo was one of the first who, having obtained the reluctant consent of his father, was received into this new academy. This was a great gratification to the youth. He had hitherto devoted himself chiefly to drawing, but the sight of the many splendid works of art in the Medicean gardens determined him to turn his attention to sculpture. He was then not quite sixteen.

Whatever Michael Angelo did, he tried to do well. With the fervour and the energy natural to his character, he now began first to model in clay, and then to copy in marble, some of the works of art before him. They were surprising productions for one so young.

Having found one day the statue of a laughing faun considerably mutilated and without a head, the youthful artist resolved to try if he could restore to it what was wanting. He succeeded admirably. Lorenzo, who often visited the gardens, was much struck with this display of genius, and inquired whose work it was.

"It is executed by one of Ghirlandajo's pupils," was the reply. "He and Granacci were the two he deemed most worthy of entering your academy, Signor. His name is Michael Angelo."

"I should like to see the youth," observed Lorenzo, who stood gazing at the statue; "there is great talent and genius here."

Michael Angelo was summoned.

"So, Angelo," said Lorenzo the Magnificent, "I perceive you have a taste for sculpture? That head does you credit."

Michael's dark eyes glittered. "It is a noble art!" he replied with enthusiasm. "By allowing me the honour of entering these gardens, excellent Signor, you have, as it were, raised a new spirit within me."

Lorenzo smiled. A great lover of the art of sculpture himself, he was pleased with the youth's evident devotion to it.

"Do you prefer it then to painting?" he asked.

"I do," replied Michael Angelo. "It is to me so much more wonderful and sublime."

"I see you have not exactly imitated the original in that head," observed

Lorenzo; "the lips are smoother, and you have shown the teeth. But," he added with a smile, "you should have remembered, Angelo, that old men seldom exhibit a complete set of teeth."

He passed on; and the young artist, who paid no less respect to the judgment than to the rank of Lorenzo, was no sooner left to himself, than he struck out one of the teeth, giving to the part the appearance of its having been lost by age.

On his next visit, Lorenzo, seeing this, and equally delighted with the disposition as with the genius of his young pupil, at once determined to take him under his especial patronage. "Angelo," he said, "your perseverance and improvement merit my regard. In order to give you every advantage, I am willing to receive you into my own service, undertake the entire care of your education, and bring you up in my palace as my son. What say you?"

What could Michael Angelo say to such a generous, flattering proposal! With heartfelt gratitude he thanked his noble patron, and then spoke of his father.

"I will see your father on the subject," said Lorenzo. "I trust he will not object to my wishes."

He sent for the old man, and gained his consent to the plan on condition that he himself should receive an office under government. Accordingly, Michael Angelo was lodged in the palace of the Medici, where he remained for three years. He was ever treated with paternal kindness by Lorenzo, and had the advantage of associating with the first literary characters of the age.

But Michael Angelo, with all his genius, was not of a very amiable disposition. His temper was proud and haughty; his speech too often contemptuous and sarcastic. He felt his own great powers of mind, and too frequently indulged in satire towards those who were not so gifted as himself.

Lorenzo the Magnificent died, and Michael Angelo, thrown on his own resources, studied more diligently than ever. Secluded, temperate and frugal in his habits, stern and unbending in his character, he suffered nothing to divert his mind from that on which it was set—his improvement in the art of sculpture.

About this time there was some sensation caused amongst the lovers of the fine arts in Rome, by the arrival in that city of a statue of extraordinary beauty. It was a Sleeping Cupid in marble; and great was the admiration bestowed upon it.

"It is a genuine antique," said one grave connoisseur in such things; "there is no mistaking it."

"Certainly not," observed another; "how infinitely superior it is to anything which art in this day is capable of producing!"

"It was found in a vineyard near Florence, I understand," said a third; "a peasant, while digging, came upon this exquisite proof of ancient skill and genius. It is a pity the arm has been broken off. The Duchess of Mantua much desires it for her cabinet, I hear; but the Cardinal San Giorgio has already purchased it at a high price. He is charmed with its beauty."

"My friends," said a nobleman, as he entered the hall with hasty steps, "what do you think I have heard just now? that this 'real antique' which has so delighted us all, is the work of a young man of two-and-twenty, residing at Florence!"

XUM

The group round the statue actually started with surprise.

"Is it possible?" they exclaimed; "has one in our own day executed this splendid work! It is marvellous! Are you sure you are not imposed upon, Ricciardi?"

"Quite sure. The young sculptor has produced the missing arm, and given undoubted proofs of his veracity. The cardinal has invited him to Rome immediately."

"And what may be the name of this young man?"

"His name is Michael Angelo."

During his first residence in the imperial city, Michael Angelo, surrounded by so many beautiful remains of antiquity, applied to his studies with unceasing energy and increasing diligence. He executed several works, which added greatly to his reputation, particularly a group called the *Pietà*, which is now in the church of St. Peter's, at Rome.

A little time after the *Pietà* had been fixed in its place, the young artist went one afternoon to consider the effect of his work. As he stood before it, surveying it with a critical yet partial eye, and with a consciousness that he should yet do greater things than that, two strangers entered the church. Struck with admiration at the beautiful group presented to their view, they expressed, with Italian warmth and fervour, their great and unqualified approbation.

"What an exquisite work!" cried one. "Truly it is a masterpiece! What form! what proportion! what excellent grouping! I never saw anything to compare with it!"

"Wonderful!" said the other, after contemplating it for some time in silent admiration. "What a mind must the man have who executed this! Who is the sculptor?"

"One from Bologna; at this moment I remember not his name."

"Nay, my friend, I rather think he is a Florentine. Surely I have heard so."

"You are mistaken, Bernandino; I am convinced Bologna has the honour of being his birthplace; I shall bethink me of his name directly."

"Well, any one in Rome can tell us that, fortunately. There is a young man here will set us right, perhaps."

"Ah! let us not ask him; he might laugh at our ignorance, or he might not know himself. We will find it out. The name of that man ought never to be forgotten."

"It shall not be forgotten here, at all events," said Michael Angelo, as the strangers left the church; "the *Pietà* shall not again be mistaken for the work of the Bolognese."

That night, a young man of haughty bearing entered the church, with a lantern in his hand. He approached the beautiful piece of sculpture, and smiled proudly, as in deep, indelible characters he inscribed on it, where it might best be seen—the name of Michael Angelo. This *Pietà* is the only one of his works thus inscribed.

Amongst the ruins of ancient Rome is a splendid equestrian statue of Marcus Aurelius. It is of bronze, and was originally gilt with thick leaves of gold. The attitude of the horse, and the fire and spirit displayed in it, are remarkably fine. When first Michael Angelo saw it, he looked at it for some time in silence, and then suddenly exclaimed, "Go on!"—thus stamping this famous statue with his enthusiastic admiration.

A very excellent painter lived at this time in Florence, whose name was Leonardo da Vinci. Italy was justly proud of this illustrious artist, and

Francis I. of France loaded him with favours. It has been said—but the story is a doubtful one—that he died in the arms of that monarch at Fontainbleau. Certain it is that the king held him in high esteem, and justly admired his great and extraordinary talents.

Slowly fading away from the wall of the refectory of the Church of Santa Maria delle Grazie, at Milan, is one of the most celebrated pictures of this great master. The subject is a solemn one—the Last Supper; and solemnly it is treated. The skilful arrangement of the figures, which are larger than life, and the amazing beauty of the workmanship, arrest the attention and astonish the eye of the beholder. It has thus been spoken of: "On viewing it, *one* head, one face, one attitude, one expression, comes forcibly upon the sight, and sinks deeply into the mind, till every thought and feeling is absorbed in wonder at the power which could represent so sublime a figure in so sublime a manner."

Leonardo da Vinci, like Michael Angelo, had astonishing powers of mind. He was great as a mathematician, a mechanic, an architect, a chemist, an engineer, a musician, a poet, and a painter! From a child his singular talents attracted notice; but he had not the perseverance of Michael Angelo. His magnificent designs and projects were seldom completed. He began many beautiful and wonderful works, and then, dissatisfied with them, left them unfinished. This highly gifted man and Michael Angelo were rivals. With all their admiration of each other's genius, they were jealous of the distinction each had obtained. The haughty spirit of the one could not brook superiority, or even equality; the temper of the other was capricious and sensitive. Leonardo was many years older than Angelo, and did not feel pleased that so young a man should come forward as his competitor. One day, being annoyed at some remark made by his rival, he replied with warmth, "You will remember, Angelo, I was famous before you were born!"

HISTORY OF GUTTA PERCHA. No. VI.—(*Completed.*)

APPLICATIONS OF GUTTA PERCHA.

Such an extensive series of applications of gutta percha already exists, that it is somewhat difficult to make a right selection. We may commence with those of gutta percha tubing—probably the most extensively applicable article yet made of this material. These properties are thus expressed:—

"This tubing is alkali and acid-proof, being affected only by the strongest oil of vitriol and nitric acid. The most concentrated acetic, hydrofluoric, and muriatic acid, and chlorine, have no injurious effect upon it; it is also unaffected by any of the cold fixed oils, &c. It is totally impervious to wet, and may be steeped in water or buried in damp or marshy ground, without injury. It is unaffected by salt water, and therefore valuable on shipboard. It is easily repaired. In case of any stoppage, an incision can be made in the tubing with a sharp knife, and readily closed again by means of a warm iron. Amongst its peculiar properties are—

"Lightness, combined with remarkable strength (the ¾-inch tubes having resisted a pressure of 337 lbs. on the square inch without bursting).

"It is not affected by the carbonic acid, or fixed air in water (so injurious to health in the use of leaden pipes), acetic, hydrofluoric, or

muriatic acids, alkalies, grease, &c. This remarkable property renders gutta percha valuable for the conveyance of water, lining of cisterns, &c., as it preserves the water in its natural purity, uncontaminated by the mineral poisons destructive to health, which result from the use of leaden pipes, &c.

"It is also valued for its indestructibility by wet, moisture, &c.; its peculiar power of resisting frost; the great lengths in which it can be made (50 to 500 feet) without a joint; the ease with which the requisite joints can be made; and its extraordinary power of conducting sound. Gutta percha tubing is applicable for the following purposes:—

"The conveyance of water, oil, acids, and other chemicals, liquid manures, &c.; drain and soil pipes; suction pipes for fire-engines; pump barrels and feeding-pipes; ship pumps; syphons; ventilation, &c., of mines, public buildings, &c.; for watering gardens and streets, washing windows, damping floors, &c.; ear and speaking trumpets; speaking tubes for warehouses, dwelling-houses, ships, &c., in lieu of bells; for enabling deaf persons to hear sermons, &c."

At Stirling a conclusive evidence of the singular strength of these tubes has been given. The pressure of water in that town is higher than in any other in this kingdom; the head of water being upwards of 450 feet high. This enormous pressure was withstood by the gutta percha without visible token of injury, while leather hose, strongly riveted, is rent asunder by it almost immediately, the rivets flying out, and the joints bursting.

Certainly one of the most remarkable properties of this tubing is its extraordinary power of conveying sound. The ticking of a watch has been distinctly heard at a distance of 450 feet! Perhaps one of the most singular uses of it this way has been the communication established between the top and bottom of deep mines. At a coal-pit in Monmouthshire a speaking tube, 400 feet long, has been fixed so that the miner can summon the engine-man, or hold conversation with him with complete freedom, although separated by this great depth. For churches an ingenious arrangement is adopted. A gutta percha funnel (see cut) is placed either inside (so as to be completely out of sight of the congregation), or in front of the pulpit, to which the tubing is attached, and carried under the woodwork or floor, to the pew in which the deaf person sits. The end of the tube (which is all that appears) is applied to the ear. The softest whisper in the pulpit is distinctly heard in the pew, when the ear is applied to the ivory terminal.

For medical men, tubes of this material are very useful for midnight conversation with patients outside. A number of clever acoustic instruments have also been made of gutta percha, such as ear trumpets, speaking trumpets, stethoscopes, &c.

It is also useful in various ways for splints, and a group of these which might have been seen at the Great Exhibition of 1851, is shown in the annexed cut.

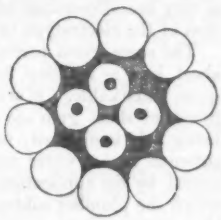
The cause which appears to confer this peculiar property on gutta percha has not yet been distinctly stated; but it appears to us to lie in the non-vibratory character of the walls of the tube. Noises from without have thus little effect on the passage of the sound. Pipes of tin or wood

are easily thrown into vibration by any sound external to them, and the communication of the sound within would thus appear to be materially interfered with.

As a domestic telegraph, gutta percha tubing is equally valuable; and an arrangement for this object, of an ingenious kind, has been invented by a Mr. Whishaw. To this the uncouth name of the Telekouphanon has been given. It is simply a gutta percha tube, with a mouthpiece at each end, to which a whistle is fitted. When it is desired to call attention, the whistle is removed, and the person blows into the tube. This causes the whistle at the other end to sound, and thus directs the person to the tube, through which the order is conveyed. It is said that a conversation could be carried on without difficulty at three quarters of a mile, or even a mile.

ARTICLES IN GUTTA PERCHA.

We have already alluded to the insulation of electric telegraph wires by gutta percha; and this constitutes one of its most valued and important purposes—for, by its assistance, even the sea is no longer an obstacle to the instantaneous transmission of intelligence. The wires are generally protected by an outer coating of tarred rope, and over this by a coating of galvanised wires. The cut exhibits the appearance of a section of the submarine wires between England and France, taken from a piece sent to the writer by the Gutta Percha Company. The four central dots represent the all-important copper wires, surrounded by their covering of gutta percha; at the circumference are seen the galvanised iron wires intended to protect the rope from injury.



SUBMARINE WIRE.

It appears, from various experiments, that gutta percha is not affected by wet, or salt water. The telegraphic engineer of one of the large railways states that more than forty miles of the gutta percha covered wire, for electro-telegraphic purposes, have been laid down on the London and North Western Railway. Of this quantity, about fifteen miles have been placed underground. A portion of the wire has now been in constant use for nearly a year and a half. Up to this period, the protective influence of the gutta percha covering has been perfectly satisfactory.

For experimental purposes, some of the gutta percha covered wire has been laid in the German Ocean. It was submerged in the sea for more than a year. Where the wire was placed, marine insects eat away and

completely destroyed pine timber, of great thickness, in less than seven years. The gutta percha covering to the wire, however, remained intact, although a portion of it was fastened to timber, which, owing to the ravages of these insects, had already been renewed.

For the electrotypist, gutta percha appears to be very useful; and the following account has been published of the method of obtaining a mould of this material. Small objects, as seals, may be impressed directly, as upon sealing-wax, the gutta sheet having been sufficiently softened by heat; larger ones, not very high in relief, should be first warmed, placed on a flat surface, and sheet gutta percha, previously dipped until it becomes quite soft into boiling water, laid carefully on them, pressed with the hand into contact with their surface, and the whole then transferred to a press, and kept there until nearly cold. In default of a screw-press, heavy weights may be used to effect the object.

Printing type, wood blocks, and engraved plates, may be copied in the most perfect manner by this means, without risk of injury to the originals. In the case of type, great pressure should not be employed: the gutta, being forced too far into the interstices between the letters, forms such depressions in the mould as obstinately retain air-bubbles, and thus prevent our obtaining a perfect cast adapted to printing. If the object be in high relief, the following method is the most eligible for copying its details:—Let the gutta be boiled in water until quite soft, then carefully freed from moisture by pressure in a cloth, rolled into a ball, and assiduously pressed with the hand into all the sinuosities of the model, commencing in the centre, and gradually extending the pressure, so as to drive the air before it, until the edge is reached, when it may be transferred to the press, or heavy weights placed on it as before mentioned. Those French cigar and card cases, purses, &c., ornamented with electro-silvered copper casts, which have been lately introduced into commerce, appear to be produced from gutta percha moulds; and if this be the case, they form a very fine illustration of the capabilities of this substance in the application of the electrotype to practical purposes.

The sheet gutta percha is coming into extensive use as a substitute for sheet lead as a lining for cisterns. The simplicity of this application is quite remarkable. If we suppose a wooden cistern thus to be treated, five pieces of sheet gum are cut to the sizes for the bottom and sides: these being held temporarily in their places, bands or strips of gutta percha are softened in hot water and laid along the joints, to which they are firmly united by the application of a hot iron. The principle, indeed, is that by which the plumber solders two sheets of lead together; but the process is altogether much more facile and expeditious. For ordinary cisterns, the thickness somewhat exceeds an eighth of an inch, and such a sheet weighs six to eight pounds per square yard. There is thus a cistern within a cistern, for the gutta percha does not adhere to the wood; the wood, in fact, acts simply as a case or envelope, to keep the real cistern in shape.

With one further extract we must bring our notice of the applications of this all-useful material to a conclusion.

The late expeditions in search of Sir John Franklin have proved the value of gutta percha in a remarkable manner. Each of them took out sledge boats of this substance for use among the masses of ice. Fitted with a skate, the boat served as a sledge; floated, it would carry five or six persons with ample provision; at other times it might be folded up, or converted into a wrapper or bed-tent, safe against the cold, that three

or four men might sleep under. Its weight was only eighteen pounds. The captain of "Lady Franklin's Expedition" stated that "the gutta percha boat proved an invaluable acquisition." After undergoing all the rough work of the voyage, "it returned to England not in the least damaged, and in almost as good condition as when she left." For ordinary life-boats gutta percha must prove very useful. Beside their buoyancy, they cannot be stove in by rocks, &c.

Mr. Snow, who went out in the Prince Albert Expedition, has given a most favourable report of the gutta percha boat used in that expedition.

"The value of gutta percha as an article applied to boats, could, perhaps, never have been better tested than during the late voyage of the 'Prince Albert' in search of Sir John Franklin; and I feel very great pleasure in giving my humble testimony to its undoubted merits. Having in almost every instance had charge of the gutta percha boat, in the various examinations of the coast we made, and in rough passages through the ice, I had good and ample opportunities of giving her a fair trial, and the result was highly satisfactory.

"The first trial she received was off the Greenland coast, when we were surrounded by icebergs. I proceeded in her to a large berg, for the purpose of procuring water, and it was found that she pulled lightly, and swam as buoyantly as we could wish. The various pieces of ice that she unavoidably ran against did her no injury, and they glided past her without leaving the slightest indentation or mark of the contact.

"On the night of the 17th July I again had an opportunity of testing her qualities. In searching for the Danish settlement of Upernavick, I proceeded in her for several miles through the various inlets and channels abounding in the 'Woman Islands.' On one occasion I had her pulled up high on the rocky beach, while landing to examine, and I could not perceive the slightest mark of a scratch, from the rough nature of her bed, such as an ordinary boat would have received if I had attempted the same with it. Upon returning to the ship, we ran through a small stream of rather close ice, and I was agreeably surprised to find how quietly the gutta percha appeared to slip through it, and how well it resisted the different attacks it received. As a memorial of our visit, and the value we attached to the article of which our boat was made, the inlet we were then making our way through was called 'Gutta Percha Inlet;' a name it will no doubt always retain, and be remembered by among whalers.

"But the severest trial it endured, and endured successfully, was on both my visits to Whaler Point, Port Leopold. To those unaccustomed to the nature of such ice as was there met with, it will be impossible fully to conceive the position a boat was placed in. The mere transit to and fro among loose masses of ice, with the sea in a state of quiescence, would have been quite enough to have tested the value of gutta percha boats; but when, as in the present case, these masses were all in restless agitation, with a sea rolling in upon an opposing current, it might have been well excused—and without deteriorating from the previously attested goodness of the article—if it had not resisted the severe shocks it received. My first visit was difficult enough, but the second was far worse; and nothing but the exigencies of the service would have warranted me in attempting to force a way as I did. My dependence, however, was upon the already well-tried qualities of the boat. Sliding through and over the ice; sometimes lifted completely out of the water by the sudden contact of a restless floe, and at others thrown sideways upon an adjoining craggy piece, I

XUM

think it would have been next to impossible for any other kind of boat to have been otherwise than crushed or stove on the instant."

In detailing these applications of this extraordinary material, we have merely selected a few of the most interesting, and of those which are well authenticated. Gutta Percha enters, however, into every part of our domestic, as well as social, philosophical, manufacturing, and engineering requirements. It is not less useful in the form of soles to our shoes, than in that of bands and tubing. In an ordinary sitting-room it might form the curtain rings, the picture cord, the lining for the walls, the inkstand and pen-tray, the watch-stand, card-basket and bracket, the ornaments for the sideboard and for the ceiling, the speaking-tube to the kitchen, and the gas-pipe to the table—in short, it is a substitute for wood, glass, metal, string, and porcelain. And now that the advantages it confers are appreciated, we should greatly miss its presence if, from some unexpected cause, the supply were cut off, and this universally serviceable material denied to our use.

ASSYRIA. HUNTING.—No. III.

We have spoken of the combats between lions and bulls, which formed a favourite subject for the embroidered borders of royal garments. In these the courage and power of the bull are well depicted in one scene, in which a lion has leaped upon his antagonist's back, and strives by tooth and talon to maintain his hold; a second bull gallops up to the succour of his fellow with threatening front. In another, the tawny savage has sprung at the throat of the bull, while another of the herd, pawing the ground with his hoofs, lowering his head, and lashing his tail to and fro, runs up behind.

Lion and Bull Fight.

In another, the bull bowed to one knee, by the impetus of his antagonist's mighty bound, seems in the very act of throwing up his head with a shock that will cast his foe over his back into the air; nearly in the identical attitude delineated by Captain Williamson, in his spirited representation of a combat between a buffalo and a tiger. The reproduction of these bestial conflicts with so much truth, renders it probable that they were not less common among the ancient Assyrians, as exciting shows for popular delight, than they are among the modern Asiatics.

Captain Williamson's description of the tiger's mode of fighting when opposed to the buffalo is doubtless equally applicable to that of the lion, and is very illustrative of these ancient sculptures. When at length, after

much manifestation of cowardice, the tiger "does summon up courage to oppose his assailant, he displays wonderful vigour and activity. His *claws are distended*, and wherever they touch they fail not to draw streams of blood; actuating the buffalo to the most desperate efforts, but which are not of long duration. The immense strength of the tiger *lies in his fore-arm*, and would prove fatal to the buffalo if there were an opportunity

TIGER AND BUFFALO FIGHT.

given for a blow to take proper effect. The buffalo being on his guard, avoids too close an engagement, but ever *keeping a front* to his opponent, rushes towards him with his whole force, and recedes with surprising celerity as soon as the tiger shows his intention to strike. Sometimes the tiger will follow and make a desperate spring, which, however, the buffalo either avoids by rapidly shifting his ground, or at the same moment, darting forward, meets the tiger with his horns." Capt. W. has never seen a rencontre between a tiger and a *wild* buffalo, but from what he has witnessed of the sufficiency of a tame one, he judges that the tiger would have not the least chance in the conflict.

No trace of the dog, either as an auxiliary to man, in the chase of the wild animals, or in any other capacity, appears on the Assyrian sculptures; a circumstance the more remarkable, because in Egyptian monuments of high antiquity its occurrence is frequent, and that of various breeds,—some of which, resembling our modern scent hounds, are used solely for hunting. And the training of dogs for hunting is expressly mentioned as a recognised profession by the ancient Hindoo laws.

EGYPTIAN HUNTSMAN.

But Colonel Rawlinson found in the ruins of Babylon a fragment of sculpture representing, in beautiful workmanship, a man with a short club in his hand, and a huge dog standing by his side, with a collar round his

neck, from which a rope is held in the man's other hand. The relic, which is now in the British Museum, is doubtless of high antiquity, and may be Assyrian. The dog is a magnificent animal, belonging to that variety now known as the Thibet mastiff, the remarkable peculiarity of "the skin of the eyebrows forming a fold which runs down the sides of the face," being conspicuously preserved in the bas-relief.

This fine breed exceeds the English mastiff in size and in ferocity, but is warmly attached to its owners. It is covered with a rough hair of a black colour on the body, becoming rufous on the face and limbs; the lips are pendulous, and the tail curls over the back. A pair were brought to this country a few years ago from the Himalaya mountains, but they soon died. The race is found to degenerate if removed from the elevated regions which are their native home; it dwindles even in Nepaul. Yet this breed is probably the original of the mastiffs of Western Europe.

Besides the mention of Nimrod and of Esau, the Scriptures take little notice of hunting, except by incidential allusions, which yet are sufficient to show that it was familiarly practised by the Hebrews. "Canaan," observes Wase, "was hemmed in with deserts: there was the great Lebanon, and there was Mizpeh, and Tabor, and other mountains which abounded with game; and in the royall age, I beleeve hunting itself was much frequented; for though the sacred history do not, *ex professo*, take care to deliver us anything concerning these lighter recreations, yet the frequent representations made by it throughout the writers of that age, do give some probability that it was a frequent object among them, and taken from the common use. David's persecutions are sometimes likened to fowling, oftentimes to hunting; his enemies dig a pit for him, they set a snare to catch his feet. No authors of human learning, whose works yet survive, make so much mention of *gins* as the Psalmes have made; his enemies bend the bow, and make their arrows ready upon the string to shoot at the righteous. This was Esau's artillery. . . . David's enemies hide a net for him. (Ps. cxl. 5.) Neither was it unknown to the Jewish huntsmen the way of driving beasts by an immission of fear."

The passages in which fullest mention is made of the stratagems and devices employed in hunting are the following:—

"The steps of his strength shall be straitened and his own counsel shall cast him down. For he is cast into a net by his own feet, and he walketh upon a snare. The gin shall take him by the heel, and the robber shall prevail against him. The snare is laid for him in the ground, and a trap for him in the way. Terrors shall make him afraid on every side, and shall drive him to his feet." (Job xviii. 7—11.)

"Fear, and the pit, and the snare, are upon thee, O inhabitant of the earth. And it shall come to pass, that he who fleeth from the noise of the fear shall fall into the pit; and he that cometh up out of the midst of the pit shall be taken in the snare." (Isa. xxiv. 17, 18.)

This "fear," (the *formido, linea pinnata*, and δείματα θηρῶν, of the classics,) was a line of great length, to which tufts of feathers were tied; being extended through the woods, the continual fluttering of the feathers in the wind prevented the timorous beasts from passing the boundary. The same method is practised in Sicily at this day; and, what is singular, it existed just as described, among the Red Indians of Newfoundland, who hunted the wild reindeer by its means.

The "straitening of the steps" of the hunted animal, to which the Book of Job refers, whereby "he is cast into a net by his own feet," appears to

allude to the inclosing of a large space with walls of net-work or some other barrier, gradually approaching each other, until the outlet leads to an inclosure, whither the animals are driven, and where they are either captured alive, or killed by wholesale. Elephants are taken in India and in Ceylon in this manner, which has been described by Pliny and Arrian, and, in modern times, with great felicity of detail by Mr. Corse.

The length of the nets sometimes used by the ancients was astonishing. Plutarch mentions hunting-nets above twelve miles long. With these large tracts of country were inclosed, by which all the animals of all kinds therein were forced into a narrow space at the end, where the slaughter was performed.

———" Simul hirtus aper, simul ursa, lupusque
Cogitur, et captas contemnit cerva leones."—STAT. *Achill.* i. 465.

Instead of the walls of nets, or of felled trees, walls of living men are often employed by the Oriental princes, who, by shouts and the clashing of weapons, force the animals onward, and hem them in, until they reach the place whither they are intended to be driven. Something like this practice was adopted in the later periods of Assyria.

The prophet Ezekiel, in his allegory of the history of Israel under the similitude of a young lion (xix. 1—9), evidently alludes to this mode of hunting, by raising the whole country against a wild beast, by inclosing him with nets, and by thus driving him into a pit, in order to take him alive for a royal show. (See especially ver. 8.) The impotent rage of "a wild bull in a net" is alluded to by Isaiah (li. 20).

A GUILTY CONSCIENCE.

WHEN Dr. Donne, afterwards Dean of St. Paul's, took possession of his first living, as he walked into the churchyard he took up a skull thrown by the sexton out of a grave, and in it he found a small, headless nail, which he drew out secretly, and wrapt it up in the corner of his handkerchief. He then asked the gravedigger if he knew whose the skull was? He replied that it was the skull of a person who had kept a spirit shop, and who, having gone to bed intoxicated, was found dead in his bed next morning. "Had he a wife?" asked the doctor. "Yes." "What character does she bear?" "A very good one, only the neighbours reflected on her because she married the day after her husband's burial."

A few days after the doctor paid her a visit, as if by accident; asked her some questions, and at last of what sickness her former husband died. As she was telling him the same story as the sexton, he opened the handkerchief, and cried out in an authoritative voice, "Woman! do you know this nail?" Struck with horror she instantly confessed the murder.

CLIMBING AND PARASITIC PLANTS.

SOME of the most beautiful of our wild flowers are those which creep over the branches or trees of the hedges or woods. The Traveller's Joy, or Wild Clematis, with its clusters of white blossoms; the Honeysuckle, with its elegant trumpet-like tubes; the snowy balls of the large white Convolvulus, and the fragrant pink bells of the smaller species, mingle with the tangling blue or purple vetches to form a luxuriant garland on the boughs of sturdier plants. The woodland tree is entwined with wreaths

XUM

of the black Briony, and the glossy heart-shaped leaves of this plant cover with one mass of verdure many a time-stained trunk, and give to it a grace and beauty which afford delight, not only to the lover of flowers, but to him also who regards simply the general picturesque effect of nature, without very carefully marking its details.

Yet climbing plants are by no means a characteristic of the English landscape, for they are few compared with those of tropical regions, or like those of the sunny climes of southern Europe. Our two principal climbers are the Ivy and the Hop. Were our scenery deprived of the former, we should indeed lose one of its most ornamental plants. Yet its graceful wreath is doubtless often injurious to the tree which its strong stems clasp too tightly, though on the other hand it holds together the ruined walls of the building, and preserves from utter decay. Many of our old castles and churches are greatly indebted to it, not only for beauty, but for preservation and shelter from the elements.

"Who loves not,
At happy distance to discover thus
The house of God uplift its ancient walls,
Wreathed in the verdant honours of the year?
Within that sacred fane have race on race,
The children of the upland and the dale,
Devoutly worshipped; and beneath the mounds—
The grassy mounds which stud the village yard—
Withdrawn to rest at last."

The finest ivy, that at least which has the largest stems and boughs, is ever thus associated with past times; for if not found on the ancient walls, it is clambering over the oldest tree, and wreathing even the highest bough of the woodland patriarch with its elegant and verdant spray. Amid its shelter the blackbird and the thrush sing their earliest songs; and in its flowers, in the later year, many of the insect world find almost their only food.

The hop is less ornamental, for besides that it is not always green, it is much less frequent in our wild scenery, and perhaps is not truly an indigenous plant. Its long stems and rough leaves climb about the thickets and hedges, and their yellow clusters of cones, with their sweet scent, hang in July among our wild flowers, or in more luxuriance and strength grow amid the leaves which entwine the tall poles of the cultivated hop garden, and send forth on the autumnal air its most delicious of odours.

How different, however, from these plants are the tall climbers of the hotter regions of the world. There they reach to the tops of trees hundreds of feet high, hanging thence their glowing bells or stars. Some of the Lianas, or Rope plants, have leafless branches forty or fifty feet in length; sometimes they hang perpendicularly from the high summits of the trees, at others they are stretched obliquely like the cordage of a ship, and are climbed by the tiger-cats and monkeys with wondrous agility. In New Zealand a climber renders the forest almost impenetrable, and entwines round a gigantic tree 220 feet high. The very grasses have, many of them, a climbing habit, and wind around massive trunks. In the old world, especially in India and the neighbouring islands, grass plants of the different species of Rattan and Calamus twine to the very tops of trees, like the climbing plants of the new world, pass on to the next tree, and descending its stem to the ground, rise again towards its summit. Some of these have, on measurement, been found five or six hundred feet in length, and the longest cannot have been measured.

In South America the profusion of climbing plants is so great as almost to exclude the light; and so numerous are the flowers that it is impossible to tell to what species they belong. The Passion and Trumpet flowers, and those of the mountain Ebony trees, mingle with the orchises and plants like our arums, and with the long shaggy silver grey tufts of the gigantic mosses called Spanish Beard and the magnificent ferns. The author of "A Residence in Sierra Leone," graphically describes the appearance of those extraordinary climbers called country ropes, during the withered season. "They can," she says, "be compared to nothing else than iron, leaden, or leathern pipes (according to the rusty-grey or brown or black colour of their different barks), all twisted and re-twisted, plaited and woven, with every grotesque and fantastical form, until the whole space under the trees, as far as the eye can reach, appears occupied by a succession of enormous nets of irregularly-sized meshes; or if you could imagine the rigging of a ship in the most remarkable disorder, the ends of the highest ropes dangling down on the deck, and tying themselves in a thousand intricate knots to great lengths of thick coire, which in their turn are wound up one mast and down another in every strange and varied convolution." Sometimes, this author says, these stems look like huge serpents, while the spiral folds, in other cases, so encircle a young tree, that it looks like a wooden pillar, rich in antique carving.

In popular language, the climbing plant is spoken of as parasitic, and many a poet has sung of that "graceful parasite," the Ivy; but the botanist regards as parasitic plants such only as, growing upon living vegetables or animals, and sending down roots into their very substance, derive from it their nourishment. The climbing plants of our land and its parasitic species, though often confounded, have in fact no affinity, either in nature or in outward appearance, for none of our parasitic plants climb at all. In the tropic vegetation to which we have alluded, few of the climbers are strictly parasitic; neither are our mosses and ferns, for they are nourished by rains and dews, and such small portions of soil as may gather on the crumbling ruin, or lie amid the crevices of the bark of the tree.

With the exception of many of the Fungus or Mushroom tribe, and the green bough of the misseltoe, we have no native parasitic plant of much beauty; while our parasites are so few in number, that by omitting the funguses which require a volume to themselves, they may all be described even in a short paper. True parasites may be divided into two kinds, the first of which have green leaves, acting like the leaves of ordinary plants, and serving as organs of respiration and digestion. The only plant in our country of this description is the misseltoe, and there are but two known genera of this kind. The other is the genus Loranthus, which, in several countries of warmer climate, not only takes the place of our misseltoe, but, unlike this plant, is also a very conspicuous feature of vegetation, its large scarlet flowers shining amid the dark-green leaves of the tree on which it grows. Meyen describes a species of Loranthus, which covers with a scarlet carpet a large candelabra-like cactus, whose snow-white flowers, eight or nine inches long, projecting from it, present a beautiful object to the eye.

The other form of parasite is the one which includes most of our native kinds. In this the plants have no leaves, and the scales which are on some of their stems are either of brown or some other dim hue. The leafy-green parasites elaborate food for themselves; the brown, or scaly parasites, obtain it in a state of elaboration from other species. There is one circum-

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stance very remarkable in these plants, for though many of them are exposed to the greatest light, some of them even rising up on the chalk cliffs, which on the summer day seems one of the brightest of all earth's spots, yet most of them so resist the ordinary action of light, that they never show on stem or flower either a bright-green or other brilliant tint. The brown, almost as deep as that of the withered leaf, the sickly-looking yellow tinge, the dim purple, or the dingy white, being almost the only colours which they have to exhibit. Equally remarkable is the fact, that though in many cases they fix themselves on the roots of small plants, such as the Trefoils or the Lady's Bed Straw, whose stems and flowers are so delicate, still some of them have stems two feet in height, and as thick as a walking-stick.

Among these parasites, the plants called Broom Rapes are the most conspicuous, and often do they attract the notice of the wanderers in the country. Tall, thick, succulent stems of a dim-reddish hue, having scales of the same colour, bear about half-way down spikes of flowers of dingy purple and yellow, mostly scentless; but in one species, the Clove Broom Rape, bearing a sweet odour of cloves. Ask the countryman who is working near them in the field the names of these plants, and if he do not call them Strangle-weeds, he will probably give you some local name, expressive of disgust, for it is well known that these plants destroy those on which they affix themselves. The Leguminous tribe, such as have their seeds in pods, and their flowers shaped something like that of the pea or bean, are chiefly infested by these parasites, and any of them may be cultivated in the garden if planted by the furse or broom. The largest broom rape is two feet high, and adheres not only to the roots of these plants, but also to those of the clove. On some lands in Flanders, where it is abundant, the farmer is altogether deterred by it from cultivating the clove. This kind has a large thick, fleshy, somewhat bulbous root, from which a number of brittle fibres issue. The bulb fastens itself to the woody roots of the broom, or the more fleshy roots of the clove, and the fibres clasp around it. Other species grow on the yellow bedstraw, the woolly kidney vetch, or on the nettle or hemp, the lilac scabious, or various other flowers of our highways and fields.

Very similar to the Broom Rapes is our Scaly Toothwort, which, however, does not grow on open plains, but hides in the deepest recesses of the woods. It is a curious leafless plant, of humble growth, with whitish scales and purplish flowers. The upright succulent stems spring up in groups of three, four, or more in number from the roots of the elm, hazel, or other trees. Not only are its colours dim when growing in the shadow of the wood, but it is remarkable that the rows of flowers which grow down one side of the stem are as often turned away from the light as towards it, contrary to the well-known habit of plants in following the light.

Mr. Dovaston, who planted this toothwort on the roots of the hazel, and after four or five years' trial of patience succeeded in getting it to grow there, remarks of it—"It will turn pink or purple when very much exposed to the light; for having cut away some of the hazel branches to bring it more in view of the walk, the sunbeams in a few days turned it so very pinky and purple, that some ladies were very much struck with the beauty and delicacy of its colours, though the plant itself is rather of a repulsive and cadaverous aspect." This flower is called by country people "Clown's Lunywort."